

# Saturday Magazine.

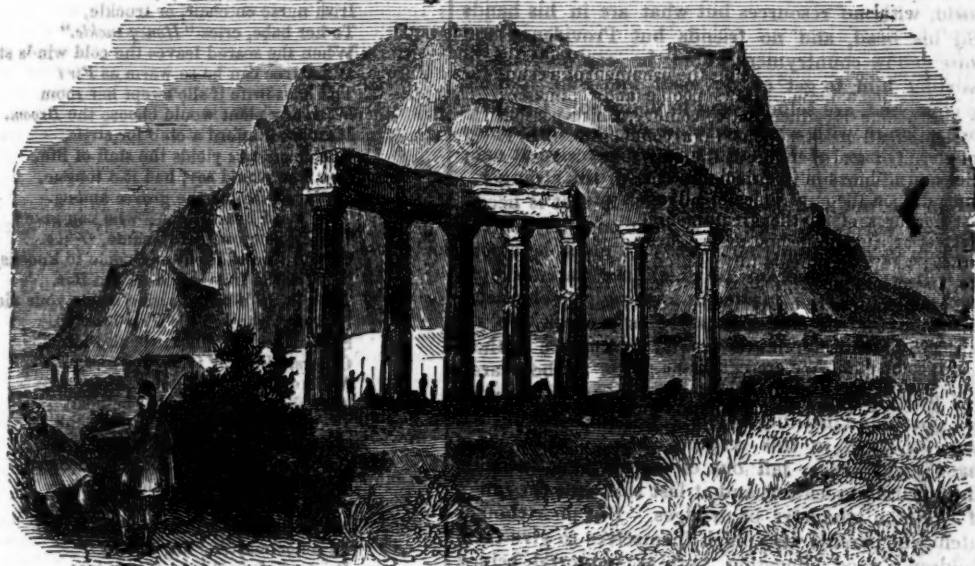
No 497.

SUPPLEMENT,

MARCH, 1840.

PRICE  
ONE PENNY.

## A BRIEF HISTORY OF ARCHITECTURE. No. I.



REMAINS OF THE TEMPLE OF NEPTUNE AT CORINTH.

In Architecture, too, thy rank supreme;  
Thou art where most magnificent appears  
The little builder man; by thee refined,  
And, smiling high, to full perfection brought.  
Such thy sure rules, that Goths of every age,  
Who scorned their aid, have only loaded earth  
With laboured heavy monuments of shame.  
Not those gay domes that o'er thy splendid shore  
Shot, all proportion, up. First, unadorned  
And nobly plain, the manly Doric rose;  
The Ionic then, with decent matron grace,  
Her airy pillar heaved; luxuriant last,  
The rich Corinthian spread her wanton wreath.  
The whole so measured true, so lessened off  
By fine proportion, that the marble pile,  
Formed to repel the still or stormy waste  
Of rolling ages, light as fabric looked  
That from the magic wand aerial rise.  
These were the wonders that illumined Greece,  
From end to end.

Thomson's Poem on Liberty.

In a recent Supplement\* we bestowed a few hasty glances on the primitive houses of several of the rude nations of the globe; and we promised to continue the subject, with a survey of the houses of civilized nations. But the transition is by no means abrupt: it is slow and gradual as civilization itself, the progress of which may be accurately traced by marking the various gradations and retro-gradations of man in the arts of life, through successive ages; sometimes advancing to a degree of splendour which even now excites our admiration; at other times sinking into ignorance and insignificance, such as awaken our pity. To read of the wonders of Babylon and Thebes; and to contemplate existing ruins of the mighty nations that have been; and then to watch the progress of man through many ages of barbarism;—all this serves to remind us of the instability of human things; and that, while we admit man to be eminently progressive, he is subject to retrogression in the arts of life, as well as in morals and religion: also, that nations, as well as individuals, rise from the weakness of infancy to the vigour of manhood, flourish for

a while, fall into decay, and then slowly and silently disappear.

The transition from the houses of uncivilized to those of civilized nations, includes an extensive and important history, a slight sketch of which is all that we can hope to supply. It involves, in fact, a history of ARCHITECTURE,—the finest of all the fine arts; one which includes within its extensive domain the science of mechanics, and the resources of much of the sound philosophy of the day; as also a host of minor arts and trades, which are subsidiary to the one great object of erecting a structure, which will not only endure for ages, but command the respect and admiration of man by its noble appearance, its fair proportions, the excellence of the materials employed, the workmanship bestowed upon its details, and its internal arrangements in every respect adapted to the purposes for which the building was designed: all these objects it is the business of Architecture to fulfil; and these objects call for the display of the highest genius and talents, on the part of the architect who is to supply them.

Thus the reader will be enabled to gain a concise idea of the sense in which the term "Architecture" must be adopted. It is restricted to such edifices as display symmetrical arrangement in the general design, and suitable proportions in the several parts, with a certain degree of ornament or enrichment tastefully applied. In this sense the houses of rude nations are not architectural: they are erected for convenience only; generally, in the quickest manner, and of such materials as are most easily accessible. But it may be said that the great object of architecture is, to afford habitations for individuals, and coverings for assemblies; to give shelter and protection amid the Summer's heat, the Winter's cold, and the general inclemencies of the seasons; and likewise safety from the attacks of thieves and ferocious animals;—that these conditions being completely and effectually fulfilled, the objects of architecture are attained. But it has been well observed that architecture bears the same relation to building that literature does to language. The *patois* in which rustics express their wants and exchange their ideas, may certainly be called

\* See Saturday Magazine, Vol. XV., p. 33.

language, and as such be sufficient for communication between man and man; but no one will pretend that such language is guided by taste or propriety, or is a fitting vehicle for the thoughts and ideas of high intellect and refinement. In the same way the mud wall, the floor of earth, and the turf or bark roof, with a hole in it to afford exit to the smoke may be called a *house*; but surely not one adapted to the wants and desires of civilized man:—the mere heaping of stone upon stone is not architecture; and indeed, whatever be the materials, unless they be combined with taste and skill, the result will be one of but limited utility. As an able writer can exert unbounded power over the mind of his reader by the skilful combination of words, which, taken individually, are insignificant; so the masterly disposition of the skilful architect will dignify the meanest materials.

One of England's greatest architects, Sir Christopher Wren, has thus spoken of his art:—"Architecture has its political use, public buildings being the ornament of a country: it establishes a nation, draws people and commerce; makes the people love their native country, which passion is the origin of all great actions in a commonwealth. It aims at eternity; and therefore is the only thing incapable of modes and fashions in its principles, (the Orders,) which are founded upon the experience of all ages, promoted by the vast treasures of all the great monarchs, and skill of the greatest artists and geometricians, every one emulating each other; and experiments in this kind being greatly expensive, and errors incorrigible, is the reason that the principles of architecture are now rather the study of antiquity than fancy."

A history of architecture at the present time must necessarily be incomplete. We are not in the possession of positive facts respecting the first dawns of the art among civilized nations: indeed, as each nation must have a history of civilization peculiarly its own, the early chapters of which are now lost, so must the origin of architecture be peculiar to each nation, which has established a mode of building supposed to be peculiar to itself; and to decide what that origin really was, is now for the most part impossible. Accordingly, we find in our architectural literature that the early history of the art among various nations presents much of theory (sometimes founded upon apparently legitimate deductions), and much of conjecture, as is generally the case with civilized man, whether as respects his investigations of the works of nature, or of his own species. He is anxious always to explain what is often inexplicable, either because it is above the powers of his mind, or because Time, in his silent passage over the earth, although sparing as yet some of the more massive structures of man, has swept away the minor details which would have supplied circumstantial evidence of the existence, the manners, the customs, and the state of civilization, among races which have long ceased to exist.

In proceeding to lay before the general reader a brief history of architecture, it is of course impossible, in the short space of two or three supplements, and consistently with the elementary nature of our publication, to trace the progress of the art in all ages, and among all people: nor is it necessary that we should do so; since many historical points connected with architecture are marked with great complexity. The origin of the Orders, for example, is a prolific source of debate; and the more so since nothing is left for us but conjecture: the origin of the pointed arch again is equally obscure; and more than fifty distinct volumes, by as many different authors, have been written on the subject without leading to any satisfactory results. These and similar grounds of contest we shall pass lightly over; and in order to mark our progress distinctly, and to show a proper connexion, we propose to describe some of the broader and more important features which have successively appeared on the face of the art. These may be conveniently digested into eight sections or epochs, thus: *First*, ASSYRIAN Architecture, in which bricks were probably first invented and extensively employed. But of the Assyrian mode we have no definite knowledge, except such as is incidentally afforded us in the Sacred Writings. *Secondly*, EGYPTIAN Architecture, in which granite and marble were worked on an extensive scale, with the adoption of a distinct style, as marked by the buildings of Thebes, Dendyra, and other monuments of ancient Egypt. Connected with Egyptian, we may also refer to Indian and Jewish Architecture. *Thirdly*, GRECIAN Architecture, in which we first observe the cumbrous building materials brought under the beauty of proportion, and made to assume graceful ornaments. Between the

seventh and fourth centuries before Christ the most beautiful temples were constructed; such as those of Pæstum, Ægina, and Corinth; and also the Parthenon. *Fourthly*, ROMAN Architecture, in which the Arch was probably first employed, if not invented; the use of which we see in works, which the Greeks, for want of it, could never have executed; such as the great aqueducts, bridges, &c. The best period of this style was probably from about A. D. 76 to 138. *Fifthly*, THE FIRST CHRISTIAN ERA, in which the Dome was perfected. We may mark this epoch by the death of Justinian, A. D. 565. *Sixthly*, SARACENIC Architecture, which was derived from the Roman, and became afterwards peculiar to the Mohammedan countries. *Seventhly*, THE SECOND CHRISTIAN ERA, in which the Pointed Arch was introduced, whereby a wonderful lightness combined with strength, and height with elegance, was imparted to the numerous religious edifices which about the thirteenth century were scattered almost everywhere over Europe, and all of them marked by the same general features. *Eighthly*, THE CINQUE-CENTO STYLE, or the revival of ancient art, which, in the fifteenth century, led to the almost sudden abandonment of the pointed style.

### I. ASSYRIAN ARCHITECTURE.

THE origin of architecture takes us back to the days before the flood; we are informed in the Holy Scriptures that Cain built a city, and called it after the name of his son, Enoch; but we are not informed of what this city consisted,—neither of the mode of constructing the houses, nor of the quality of the materials. We learn also from the same source, that Jabel was the father of such as dwell in tents; and this form of dwelling may probably include most of the primitive abodes of man in a warm climate, covered perhaps at first with leaves, with the bark of trees, or with the skins of animals killed in the chase. In the time of Noah, man must have advanced considerably in the art of building; because much skill must have been exerted in the construction of the ark, so as to withstand the rage of the storms to which it was so long exposed.

Ashur built the cities of Nineveh, Rehoboth, Calah, and Resen, as we learn in the tenth chapter of Genesis. The art of making bricks must have been well known at the time the city and tower of Babel were built; since we find that the people said one to another, "Let us make brick, and burn them thoroughly. And they had brick for stone, and slime had they for mortar." Gen. xi. 3. We are not told what were the dimensions or figure of this tower: we are only informed that it was the vain intention of those who reared it to cause its top to reach the clouds; so that they might make to themselves "a great name, and be no more scattered abroad on the face of the earth;" or, as it has been with some reason supposed, that they might be in possession of a safe retreat from the waters of another deluge. Their design, however, was frustrated by the intervention of the Almighty, and the buildings remained unfinished. It is quite uncertain whether this city and tower be the same Babylon and tower as described by Herodotus and Strabo. The former says it was a square building, measuring a furlong on each side. From a winding stair, or rather an inclined plane, which went eight times round the exterior, the building appeared eight stories high; and each story being seventy-five feet, the height of the whole must have been six hundred feet: the inclined plane was broad enough to allow carriages to pass each other.

We are informed by Lucian that the temples of the ancient Assyrians were less ancient than those of Egypt. Other historians suppose that the arts passed into the latter country from Assyria, which empire was founded by Nimrod, the builder of Nineveh. About the time of the founding of this city, Troy is said to have been founded by Scamander, while Mizraim, the son of Ham, conducted a colony into Egypt, and laid the foundation of a kingdom. Of the once mighty Babylon the very site is now a matter of dispute; its supposed ruins present nothing but shapeless masses of brick, which convey no idea of any style of architecture, or of the progress which the art had once made there.

### 2. EGYPTIAN ARCHITECTURE.

It is extremely probable, in the absence of all certain information, that architecture originated more in the devotional feelings of mankind, than in any other way. Diodorus Siculus, in speaking of the ancient Egyptians, says, "They call the houses of the living, *inns*, because they stay in them a little while; but the sepulchres of the dead they call *ever-*



lasting habitations, because they abide in the grave to infinite generations. Therefore, they are not very curious in the building of their houses; but in the beautifying of their sepulchres they leave nothing undone that can be thought of." In India, as well as in Egypt, in Greece and in Italy, in France and in Britain, in Mexico and Peru, ruins have been from time to time discovered of buildings, evidently connected with the worship of the Divinity, the dates of which are far beyond our sources of information. These edifices display various degrees of refinement, and of knowledge of the arts of life; but we seldom if ever meet with buildings intended for the personal accommodation of man in the early ages, possibly on account of the perishable nature of the materials of which they were constructed.

Most writers refer to Egypt, as the country where the sciences were first cultivated, and the arts brought to a high degree of perfection: but the opinion is by no means uncommon, that Ethiopia furnished the land of the Pharaohs with the rudiments of its architecture. It is likewise supposed that Egypt, Nubia, and even India, derived their notions of religious architecture from the same source. In all three countries are found excavations in the rock, of immense extent, and furnished with colossal figures; vast masses of building raised from the earth, with a profusion of statuary and carving; also shrines worked in a single stone; and the whole of these achievements on a scale of such vast extent and magnificence, and the apparent results of such wondrous physical or mechanical powers, that we are disposed to think of the giants who are said to have lived in the days before the flood, rather than of men of the ordinary stature, as the authors of all these splendid works. "No people," says Champollion, "either ancient or modern, ever conceived the art of architecture on so sublime and so grand a scale, as the ancient Egyptians. Their conceptions were those of men a hundred feet high; and the imagination, which in Europe rises far above our porticos, sinks abashed at the foot of the one hundred and forty columns of the hypostyle hall at Karnac."

But, however ancient and wonderful Egypt may be, it is vain to refer to it the origin of all architecture, since it probably happens that every nation which claims a style peculiarly its own, owes that style to natural circumstances, to soil, to climate, to the bounty or to the scarcity with which nature has enriched or impoverished the country; to the religious feelings of the people, and to the ideas entertained by them of a future state of existence. Thus, it was the peculiar tenet of the ancient Egyptians, that, after the lapse of three thousand years, the spirit would return and re-animate the corporeal tenement which it formerly occupied, provided such body were preserved entire and uncorrupt:—hence arose the practice of embalming and preserving the dead; hence arose the preparation of those wonderful labyrinths and pyramids, wherein to preserve the bodily organs until the spirit should be ready to revisit them;—and hence also the object of those sublime and durable works of architecture, which still distinguish Egypt among the nations of the primitive world.

But we must not forget the habits of the natives of hot climates: in their anxiety to avoid the scorching heat of one season, and the incessant rain of another, the natural cavern, or the cavern hewn in the rock by art, offered an agreeable retreat from the one, and a safe shelter from the other. Here, too, it is probable they were at an early period accustomed to prepare a dwelling for their gods, and a convenient asylum for the practice of their religious rites. As civilization advanced among them, and taste naturally improved, they added to their excavated temples a portico, and they sometimes hewed the face of the rock itself into the form of a splendid building.

Although the architecture of the Egyptian presents many features in common with the Hindoo excavations, it does not necessarily follow that they were connected.

It is true that both people believed in the transmigration of souls: both constructed large excavations and enormous insulated monuments. The lotus and the palm were the favourite ornaments of both; their sculptured figures were equally stiff and motionless:—hence it has been considered that the grottoes of the Thebais are children of the excavations of Ellora, and the pyramids of Egypt the offspring of the pagodas of India. But, as Mr. Hope says, there are not sufficient grounds for these inferences. "Those phenomena of nature which are most general, most striking in every country, and in every country influence the condition of the inhabitants most obviously and extensively, would, in every country alike, become the first objects of observa-

tion, scrutiny, record, and science; and as architecture, like every other art of utility, must derive essentially out of the peculiar climate, and locality, and productions of the country where it arises, it must consequently, even where equally original and native in two different countries, offer certain coincidences, according to the degree in which these countries possess these features in common with each other, even though intercourse or communication should not have occurred between them."

Egypt and India are both possessed of a hot climate, of a river rising in high mountains, and annually overflowing its lower banks, on which the inhabitants depend for their crops; possessed also of an alluvial soil, intersected, for the sake of necessary irrigation, by many cuts and canals, and both producing animals and vegetables of the same peculiar species. On the waters of the rivers of both regions the *Nymphaea*, or water-lily, and along their banks the banana and the palm, occur in the same abundance. Around this humid and flat expanse rises a circle of arid rocks, fit only for the shelter of goods and stores, for habitations of the living and for receptacles of the dead; and consequently producing in its inhabitants similarity in their modes of life and methods of industry, in their topics of hope or fear, of amusement, study, or contemplation. Thus these two countries present with each other coincidences, remarkable, but accounted for by the nature of the regions in which they exist. "Moreover," says Mr. Hope, "in all countries alike, in the infancy of architecture, inability to enclose a vast extent of space, and to combine solidity with lightness, produces massiness in the parts within, and slope on those without. In like manner, in the infancy of sculpture, incapacity to seize and embody the ever-changing appearances of movement and expression, engenders rigidity of limbs, and immobility of features; and thus we may explain these points of similarity. We cannot, therefore, in Egyptian art, especially in architecture, find any circumstance to warrant us in contesting its claim to originality, or in considering it as derived, much less as imitated, from that of the Hindoos."

The difference between the Hindoo and Egyptian architecture, in point of science, art, and mechanical resources, is also very striking. In the former the most stupendous works are those excavations in the solid rock, in the execution of which patience and perseverance are the chief requisites: their mouldings and general ornaments are repeated to excess, and conceived in the extreme of insipidity and heaviness: their figures often display a preposterous reduplication of limbs, pervaded by a general stiffness due to an infant state of art; and we seldom meet with monuments springing from the earth of great magnificence and difficult execution. But the Egyptians, on the contrary, although quite as stupendous in their excavations as the Hindoos, evince a more determined character this way, in such edifices as the Temple of Thebes and the Pyramids of Memphis, the materials for which are raised on the surface of the ground, after being conveyed an immense distance from the quarry, and are then elevated to a great height, and cut and interwoven with others in the most ingenious and solid manner. The forms and outlines of Egyptian architecture are likewise different in detail: they are beautifully varied and contrasted: and although their figures are to a great extent stiff, yet this stiffness seems due less to the rude skill of the artist, than to those laws which prevented them from varying the original forms and attitudes of these figures, in a country where, as the written language was symbolical, it was deemed important thus to legislate, that, in process of time, the meaning might not be lost in consequence of variations in the forms of the symbols. "Many of those," says Hope, "that are very coarse in their limbs and extremities are exquisitely wrought in the features; and now and then we find a figure of an animal, or even a human being, finished with truth and beauty, which we should in vain seek in India, and which proves in the Egyptians a great though repressed superiority of skill."

It need not excite the reader's surprise that the early history of the architecture of all nations is connected more with temples, tombs, and religious edifices, than with domestic habitations. In countries where nature yields her fruits abundantly, and almost without culture; where the climate is warm, and shelter and protection scarcely needed, except during certain seasons of the year, it is not wonderful that the natives of any country, like Egypt, should have bestowed most of their care upon edifices of exalted and permanent necessity; impressed, as they were,

with the feeling that they were providing for themselves "everlasting habitations;" while for the construction of their "luns," or every day abodes, during life, they were content with the fragile materials yielded to hand by the country around, such as the slime and the rushes of their rivers; houses which must easily have been swept away on the decline of civilization. In speaking of Thebes, Denon says: "Still temples—nothing but temples—not a vestige of the hundred gates so celebrated in history; no walls, quays, bridges, baths, or theatres; not a single edifice of public utility or convenience. In spite of all my research, I found only the walls of temples covered with obscure emblems, and hieroglyphics which displayed the ascendancy of the priesthood, who still seemed to preside over the mighty ruins, and whose empire constantly haunted my imagination." Champollion, however, whose valuable researches in Egyptian antiquities, and whose success in the study of hieroglyphic literature cannot be sufficiently prized, speaks of the remains of quays; and many ruins, previously referred to as temples, he calls palaces.

We have on so many occasions\* entered into details respecting the pyramids, the colossal statues, the obelisks, the mummy-pits, the subterranean temples, and the colossal figures of Egypt, together with the vast excavations of India, and its enormous idol images, that we need only refer the reader, who is interested in this vast and instructive subject, to the previous volumes of the *Saturday Magazine*, as indicated in the note, and then proceed with our history as it pertains to other civilized nations, as they have successively or contemporaneously appeared on the surface of the globe.

After India and Egypt, the most ancient ruins generally referred to are those of Persia. The ruins of Persepolis are pointed out as the remains of a once magnificent structure. Its front is 600 paces in length, and the side 390 paces. The architecture is said to be peculiar, but remarkable for correct proportions and beautiful execution. The staircases conducting into the interior are strikingly extensive and magnificent: the portals and capitals of the columns are adorned with numerous figures, representing combats and processions: but many of these are rudely executed. The material of which these ruins consists, is a kind of deep gray marble, very hard and susceptible of a fine polish, which renders it almost black. The stones do not appear to have been originally united by means of cement, but of cramping irons, several traces of which still remain.

It is supposed by some writers and travellers, that the Persian style is but one of the numerous branches of the Egyptian: others think it original; and that the resemblance is rather accidental than imitative; and, that, natural causes producing similar effects, the Persians were constrained to build as the Egyptians and Hindoos did. It is extremely probable that, long before the rise of the Persian power, several kingdoms existed in that country, since called "Persia," of which nothing now remains to inform us from whence the Persian style of architecture was derived.

We are informed by Lucian that the Phœnicians built after the manner of the Egyptians; but no remains of their ancient architecture are left to confirm his information. This primitive nation was civilized at a very early period: its cities, which were numerous, were celebrated for riches, manufactures, and commerce. Tyre and Sidon, Joppa, Damascus, and Baalbec, are the well known names of the cities of this great nation which some writers identify with the land of Canaan, so often mentioned in the Bible.

It is probable that the Phœnician architects employed much timber, instead of stone, in their structures; Mount Lebanon and other places affording them an abundant supply of that material. A large portion of Solomon's temple was probably of wood, in the construction of which the Phœnicians must have been engaged. Vitruvius tells us that sometimes each division of a wall was built

alternately with cedar-wood and stones; so that first a course of wood, and then a course of stones, extended from one division to the other. This was probably the case with the temple at Jerusalem and the palace of Solomon; the latter of which is called, in consequence of the great quantity of wood used in its construction, "the house of the forest of Lebanon."

Among the shepherd-tribes of Israel, there seems to have been no impelling necessity for architectural structures. Saul, the first king of Israel, about 1250 years B. C. does not appear to have had a permanent habitation: and at Gilgal, where the most sacred rites of the Jewish faith were solemnized, a temple or monument of unhewn stones was erected by Joshua, on taking possession of the promised land, and making a covenant between God and the people. We find no mention made of any other Jewish architectural work until the time of the building of the temple at Jerusalem, 1004 B. C. on the spot made sacred by Abraham's intended sacrifice. When the tribes were divided into two kingdoms, the national temple of the ten tribes of Israel was erected on mount Gerizim. Towards the end of the reign of David we read that he built himself a house; but even the ark of the covenant was never in a fixed place, until the reign of Solomon: and we read likewise of King David expressing his shame, that he himself had a house of cedar, whilst the ark of the Lord still dwelt in a tent. This king accordingly prepared for the erection of a temple, but it was left for Solomon to complete his father's design. The summit of mount Moriah formed a plane of 36,310 square feet. Upon this plane the temple was built, divided in the same manner as the tabernacle into two chief parts, the Holy of Holies and the Holy Place, and having on the principal front a splendid portico, a hundred and twenty cubits high, probably resembling the entrance to several Egyptian temples. There appear to have been other points of resemblance between the temple of Solomon, and the temples of Egypt, such as the flat roofs, the ornaments of lily or lotus work, and the pillars before the porch, corresponding with the obelisks which were placed before the Egyptian temples. The temples of the ancients were generally without windows: but that of Jerusalem appears to have had them, and of the same form as those observed in the ruins of the great temple of Thebes.

There was a wall or inclosure round the temple, and between this wall and the building was a porch divided into three stories. There were two courts surrounding "the Temple" properly so called, or, in the words, the "Holy of Holies:" the inner court, or that in which the temple stood, called the "priest's court," or "the Holy Place;"—the outer one being for the general assembly of the people: this latter court was called "the court of the Jews." The priest's court was surrounded by apartments or houses, some of which were for the lodging of the priests, and others for the preservation of instruments used in sacrifice, &c. In the second temple,—that which was standing while Christ was upon earth,—the court of the Jews was surrounded by another court, called "the court of the Gentiles," which was the part of the temple where heathens were permitted to worship the One True God, and from whence Christ ejected the buyers and sellers:—Matt. xxi. 12, &c.

The exterior walls of the temple were of stone, ornamented with the "figures of cherubim and palm trees and open flowers." The roof was covered with plates of gold, and the interior was decorated in the richest manner. It was the custom at that period with all civilized people, to ornament their temples with gold and precious stones; and the Hebrews seem to have exceeded all other nations in this respect. It is worthy of remark, that the two pillars, Jachin and Boaz, erected by Solomon, correspond very nearly in their dimensions with those of the Doric order first invented by the Greeks, and which originally came from their colonies settled in Asia Minor. The height of Solomon's pillars without the chapter was eighteen cubits\*; that of the chapter itself was five cubits; the circumference was twelve cubits; from whence we may reckon the diameter to have been four cubits. Had they been a single cubit higher, they would have been precisely of the same height with columns of the original Doric order.

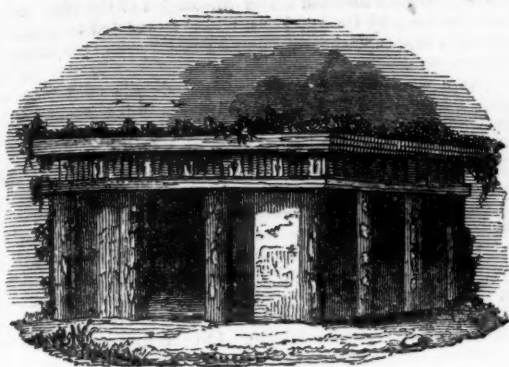
Chinese architecture is referred for its origin to the tents so much in use among a pastoral people. Its prevailing style "must be familiar," as Mr. Elmes has observed, "to every one who has drank from a China tea-cup, or who has seen many of the signs of grocers' shops." Mr. Hope thus in-

\* The Jewish cubit was about 1ft. 9 in. in length.

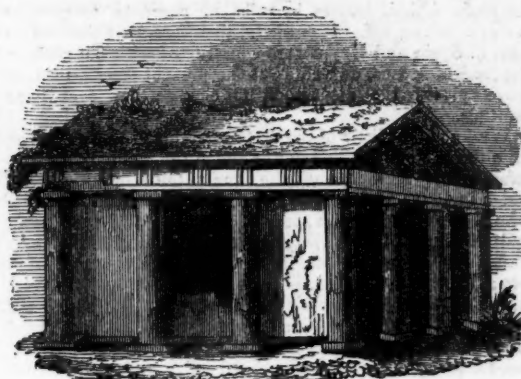
\* The references to the *Saturday Magazine*, spoken of in the text, are as follows:

The Pyramids, Vol. I., p. 137.  
Caverns, Temples, and Tombs of Egypt and India, Vol. II., p. 249.  
Temple of Elephanta, Vol. II., p. 162.  
Hindoo Idols, Vol. III., p. 188.  
Egyptian Antiquities, Vol. IV., p. 153, 185.  
Egyptian and Hindoo Columns, Vol. VI., p. 96.  
Thebes, Vol. VIII., p. 42, 82.  
Catacombs of Alexandria, Vol. XIV., p. 241.





GRECIAN HUT. No. I.



GRECIAN HUT. No. II.

geniously compares a Chinese structure with its original type,—the tent. "In the wooden pillars, destitute of marked bases and capitals, which support the ceilings in such numbers, we see the poles; in the roofs which from these pillars project so far, convex alike in their spine, their sides, and ribs, the awning of hides or pliant stuffs spread over ropes and bamboos; in the curling spikes that fringe their eaves, the hooks and fastenings; in the lowness, spread, and clustering of the different parts, the whole form and appearance and character belonging to the residences of the herdsmen their ancestors. Chinese houses seem to cling to posts, which when planted in the ground, have struck root and become fixed. The palaces only look like a number of collected awnings, and the very pagodas or towers in their loftiness are nothing more than a number of tents piled on the top, instead of standing by the side of each other. The aggregated dwellings, from the smallest village to imperial Pekin itself, in their distribution, resemble nothing but a camp; and when Lord Macartney, after crossing the whole of the Chinese empire, from south to north, —from Canton to the great wall, its furthest length—was, on the borders of Tartary, received by the Emperor in a real tent, he scarcely perceived any difference to exist between it and the millions of stationary buildings he had viewed.

"Even that other swarm from the Tartar hive," continues the same accomplished writer, "which in a wholly opposite and westward direction, by degrees penetrated to, and under the name of Turks, overwhelmed the Greek empire, distant as are its dominions, separated by the whole width of Asia from those of the Chinese monarch, enables us to retrace, in its stationary dwellings, the form of the portable tent of its nomadic ancestors. I speak not of the mosques, the caravanserais, the baths, and other public buildings, which they possessed not in their primitive roving state, and which, when they became fixed, were designed for them by the Greeks, their new subjects, after their own fashion, and surmounted by the Byzantine dome or cupola. I allude to the private habitation. This latter, from the tent-roof of the meanest cottage, to the porch of the grandest kiosk or palace, in its low spreading expanse, its widely extending eaves, broken at various angles, and supported by numerous pillars, and almost reaching to the ground, still strikingly recalls the same model, and differs little in shape and distribution from the real imperial tent, which, on the breaking out of every new war, is solemnly erected in the plains of Daoud Pacha."

### 3. GRECIAN ARCHITECTURE.

We come now to notice a style of architecture which, in elegance, simplicity, and grandeur, stands unrivalled, and has so continued during more than two thousand years; the existing remains of which continue to form the admiration and the study of every architect who desires to form his taste from the contemplation of a perfect model. We of course allude to the GRECIAN style, which is generally said to owe its origin to the Egyptian. Considerable doubt, however, exists on this point; for, besides the elements of buildings which are common to all, certain faint resemblances in ornamental details are not in themselves sufficient to establish a dependence of one style upon another. But however this may be, it is certain that if the Grecian style were suggested by the Egyptian, the model was vastly improved upon; so much so, that scarcely any features of the original remain in the copy to indicate its origin.

History or tradition informs us that Cadmus first induced the Grecians, 1490 B.C., to build in companies and to surround their houses with defensive walls; and thus originated the cities of this people. Near Argos there still exist the ruins of the walls of Tirynthus, supposed to have been a military post or citadel. Strabo supposes these walls to have been erected at a time prior to that of the Trojan war by some emigrants from Lyera in Asia Minor. Many other similar works were assigned to the Cyclopes, a tribe supposed to have come into Greece from Thrace. These walls are composed of rudely-shaped stones of large size; and passing through the wall is a gallery formed of stones laid in horizontal courses, projecting over each other, so that the sides approach together at the top; thus giving a triangular form to a vertical section of the gallery.

At this early period, when Greece contained only the scattered elements of a nation: when the people were lawless and exposed to foreign attacks; it was necessary to construct strong places for the security, either of wealth or of persons; or perhaps of both. One of these buildings was early erected, it is said, by Minyas, King of Bœotia, at Orchomenos, and is described by Pausanias as a wonderful production. At Mycenæ\* there still exists in tolerable preservation a subterranean work, called the "Treasury of Atreus." It consists of two chambers of unequal size. The outer and larger one is of circular form, and is entered by a huge doorway at the end of a large avenue of colossal walls built in nearly parallel courses of rectangular stones roughly hewn, and laid without mortar. As seen from without, the effect is that of an excavation; but internally, it is said to present the appearance of a huge lime-kiln. The walls are formed of circular courses of stone placed horizontally, each course projecting inwards until they meet over the centre. These interior projections have been cut into a smooth surface, which was supposed to have been once covered with plates of metal; bronze attaching nails being found still remaining.

In speaking of Grecian architecture, it is very difficult to proceed in chronological order, because it is uncertain at what time some of the earliest Greek writers flourished, and the inspection of existing ruins does not always suffice to inform us of the date of their erection. There appear to have been few temples before the time of Homer, who flourished about 900 years B.C. This great poet speaks of the temple of Minerva at Athens, of Apollo at Delphi, and of Neptune at Ægæ. He speaks of many sacrifices being performed on altars in the open air; and it is probable, from the language adopted by him, that the *fanes*, or chapels, of Minerva and Apollo were roofless. He describes the palace of King Priam, as being constructed of stone, and consisting of a court surrounded by apartments. Columns are also mentioned by Homer, as forming part of the palace of Ulysses; but no allusion is made to their beauty, and they were probably nothing more than wooden posts. Roofs were probably laid upon dwellings in Homer's time, formed by two or more inclined planes meeting in a ridge or point above; because, in the *Iliad*, the position of two men in wrestling is compared to two beams in the roof of a house. In some cases the roofs were flat; and we read of one of the companions of Ulysses falling from such an one.

But flat roofs to houses were common at times long anterior to the heroes of Homer. The people of Israel were commanded by their Lawgiver (Deut. xxii. 8-) to surround

\* Both Argos and Mycenæ were in that part of Greece now called the Morea.

the roofs of their houses by rails, or parapets, to prevent persons falling off. It is likely, therefore, that the houses both in Syria and Egypt were constructed with flat roofs in the time of Moses, as well as at the present day; since in those places the disposition to change has ever been wanting.

We know but little of the state of architecture in Greece, from the time of the Trojan war and of the incidental events referred to by Homer, until the time of the Ionic migration, which includes an interval of about 150 years. We are informed by Vitruvius of a temple, dedicated to Juno, being built at Argos, during the reign of Dorus, son of Helenus, which was probably about 1200 years before the Christian era; that this temple was built according to certain rules laid down by Dorus himself; and that thus originated the Doric order, which was afterwards extensively adopted throughout Greece. The proportions of the order were not, however, the subject of any fixed rule, and at the time we speak of, the Grecian buildings must have been very rude.

The arts of civilization received a sudden check on the return of the Heraclidæ to Peloponnesus. This people drove most of the inhabitants from a large portion of the country, and maintained a sanguinary warfare with those who remained; thus for a long time effectually preventing the growth of the arts of peace.

During this perturbed state of affairs, a body of adventurers, commanded by Ion, son of Xanthus, colonized that part of Asia which was previously inhabited by the Carians and Leleges. It was then, according to Vitruvius, that the temple of Apollo Panionios was erected by the colonists, in a manner resembling the Doric temples of Greece. These colonists not being in possession of any architectural rules to guide them, and being ignorant of the proportions which the columns should have in order to support the roof, invented a rule, which was to guide, not only themselves, but all subsequent workmen, in order to maintain a sort of harmony among their structures: they conceived the idea of making their columns correspond with the dimensions of the human figure; the average height of which is about six times the breadth. They therefore made the diameter of the column at the lower part equal to one-sixth of its whole length; and the system or order resulting from these proportions, they are said to have named the Doric, because the Dorians were the people who had first adopted it; the name of which people was perhaps a term including all the Greeks who lived at that time north of the Gulf of Corinth. The order was perhaps also called the Doric, to distinguish it from another order, which, according to Vitruvius, was invented or adopted by Ion himself, and hence called the Ionic order.

It is stated by Vitruvius, that the proportions of the Ionic order were derived from the female form, which is more slender than that of the male. The height of the columns was increased to eight diameters; thus rendering their appearance more light and slender, and representing rather the delicacy of the female form than the robustness of the male. The ornamental parts of the Ionic column were, Vitruvius says, suggested by different parts of a woman's dress. The mouldings of the base were intended to represent the shoe; the volutes of the capital, the tresses of hair curling on either side of the head; and the flutings of the shaft the folds of the hanging garment.

According to the same authority, a third order was afterwards invented by a sculptor named Callimachus, who probably flourished about the end of the Peloponnesian war, about 400 years B. C. This order afterwards received the name of the Corinthian; and in order to give more grace and delicacy to the columns, the standard adopted was that of a youthful female form, instead of that of a matron, as in the case of the Ionic. It does not seem to have been determined what part of the whole length was equal to the diameter; the practice of different architects being probably various. The origin of the Corinthian capital has been stated in a very pretty story\*. Vitruvius says, that a young woman of Corinth was betrothed, but before her marriage she fell ill and died: after her burial, her nurse collected in a basket the toys which delighted her when alive, placed the basket on her grave, and covered it with a tile. Now it so happened that the basket was placed immediately over an acanthus root, which afterwards grew up round the bas-

ket, and curled up from under the angles of the tile. This was observed by Callimachus, and it suggested to him the idea of a new capital for a column: he therefore perpetuated it in marble.

The general form and ornamental details of a Grecian temple have been referred by Vitruvius to the wooden hut, which an infant community in a country abounding in forests would be likely to construct. The comparison of a simple hut with the early edifices of stone, will show the general correspondence which exists between their members, and will set the reputed origin of Grecian architecture in a clearer light.

The first step towards the construction of a hut would doubtless be, the placing of a number of posts vertically in the ground, which should enclose a space in the form of a square or parallelogram: let these be compared with the columns of a stone edifice. On the tops of these posts would be laid a horizontal beam along each of the four sides, corresponding to which we see the *epistylium*, or *architrave*. Over these would be placed other horizontal beams, parallel to one of the sides of the building, in order to support the roof. These being placed at equal distances from each other, and their extremities appearing over the face of the architrave were also afterwards represented in stone by rectangular divisions called *triglyphs*. Smaller beams might yet have been required for the support of the planks, or whatever formed the bed of the roof; and these also are copied, and their projecting ends called *modillions*, while the extremities of another upper course are called *dentils*. Now as a flat covering would not be the best form of roof, in a country subject to heavy rain or snow, an inclining roof supported by beams, placed obliquely along the vertical posts, would soon be adopted in place of the flat one. The temples of Greece and Rome, which were generally rectangular and surrounded by columns, were also frequently covered by roofs inclining on both sides from a ridge over the middle of the building, and parallel to its length. The modillions and dentils with the beams on which they appear to rest, and the part of the roof above them, form the *cornice*. The whole system of horizontal beams, comprehending architrave, triglyphs, and the spaces between them called *metopes*, (which together have the name of *frieze*), and cornice, is called by the general name of *entablature*. The inclining roof was formed of rafters or *cantlierii* disposed in two planes, declining each way from the *column*, or ridge, of the roof; the upper ends of the rafters were attached to this ridge, and the lower ends rested upon the entablature. Over these rafters were placed, in horizontal positions, small timbers, called at present *purlines*, (formerly *templa*), parallel to the ridge of the roof; and over these again was another tier of rafters projecting beyond the architrave or frieze of the sides of the building, and supporting the tiles, or other covering of the roof. The roof of a building thus formed of two inclined planes, was called by the ancients *fastigium*. The triangular extremity is called the *pediment*, and the space within the cornice of this pediment is named the *tympannum*.

Having thus described the general points in which a simple hut and a Grecian temple resembled each other, we now descend to some of the minutest ornaments of the temple, in order to ascertain how far we may suppose these also to have taken their rise from the same source. If then trunks of trees are found to have given the idea of the columns which supported the edifice, from whence was derived the *plinth* or chief part of the base of the column? In the wooden hut, the main supports, if resting exclusively on the ground, would be liable to sink beneath the surface, and to fall into a state of decay owing to the effects of a humid soil. There would be perhaps an effort made to prevent these evils, by placing a tile or flat stone underneath the post, to prevent it from sinking; and the bottom of this post being liable to split by the weight above it, there might also have been a band surrounding it; from which the idea of the ornaments above the plinth were derived; so that, altogether, the base of the columns in the wooden hut might have afforded a model for imitation in the base of those of a more substantial edifice. We have already stated the conjectures which have been formed as to the origin of the capitals; but, as in some instances we find columns without bases, and in others we find them without capitals; and as, where they are adorned with both, there is much diversity in the several parts, it is needless to dwell further on the probable origin of either the base or capital, or to attach much importance to so doubtful a subject.

\* By referring to *Saturday Magazine*, Vol. V., p. 147, the reader will find a pictorial representation of the origin of the Corinthian capital, together with views of capitals, &c., belonging to the five orders.



The spiral curves, or *volutas*, which adorned some columns, have been supposed, as before remarked, to be an imitation of the curls of hair on a woman's head; or to extend the conjecture, of the curling leaves of plants, or of the horns of animals slain in sacrifice. The capitals of other columns are adorned with double rows of leaves; and this, as we have said, arose from the casual observation of such foliage growing round a bell-shaped vessel at Corinth. The shaft of a column, when carved into longitudinal furrows, is ascribed to a wish to imitate the folds of a woman's dress; or this fluting is supposed to have been invented as a support or resting-place for spears, as warriors were entering the temple. Lastly, the *triglyphs*, and other members of the entablature, may have been derived from natural circumstances, such as the flowing of rain across the entablature, which furnished the idea of channeling the ends of the beams; and the suspension of drops of water, which might have been imitated in the *guttae*, or drops.

It is impossible, however, to account for all the mouldings which occur in the columns and entablature of a building, recognised by the terms *torus*, *astragal*, *echinus*, *cavetto*, *cymatia*, and the *bird's beak* moulding. All these mouldings are capable of being much embellished, and accordingly, we find them displaying the sculptor's skill in beautiful imitations of the leaves of various plants, or of the figures of animals.

Since the discovery of the massive temples of Egypt, it has been supposed that the primitive types of those buildings must have been the rudely excavated dwellings of the early inhabitants in the rocks of that country; but on examining their present huts, built of mud and reeds in the form of frusta of Pyramids, which are probably of the same character as those of their ancestors, we are struck by so great a similarity in their construction to those of the temples, as makes us think it more than probable that the latter also took their origin from the simple hut.

It is, however, by no means necessary to look further for a type, whence originated all the details of the splendid temples of ancient Greece. We are disposed to admit the wooden hut as the rude idea of a temple, because natural circumstances are powerful in directing and constraining the proceedings of mankind; but still, we ought to render due respect to the inventive genius of man. An infant community is, in great measure, constrained to make choice of the materials which nature has prepared in the locality of their settlement; and doubtless the forms of houses which they are thus compelled to adopt, must, to a certain extent, influence the style of architecture, should that community afterwards become so far civilized as to build extensively. But one of the direct effects of civilization is to foster intellect, and to afford scope for the display of genius, whose prominent characteristic is invention. Now whether we take the cave, the tent, or the wooden hut, as the origin of any one particular style, we ought rather to allow that the inventive genius of man through successive ages, has exalted the humble model into a master-piece of art, than that recourse should have been had either to the natural circumstances of the vicinity, or to the older structures of some distant country, for the suggestion of prominent features or ornamental details. In the spirit of these remarks a modern writer says, "It must not be understood that this hypothesis [the Vitruvian] alone is capable of guiding an artist in his constructions, or of restraining the excesses of a capricious fancy; since the nature of the building to be raised, and our perceptions of beauty may be, together, sufficient to obtain these ends. In forming a portico, for example, we have to support a roof by means which may leave one or more of the sides open to the air. The roof must, therefore, be borne on columns, and between the breadth and height of these, certain proportions must subsist, which experience would soon determine for the best. The entablature might be, originally, one plain mass of stone; but it would be subsequently found more pleasing to divide its exterior surface horizontally, into two or more parts by projecting mouldings, and to ornament the facade in various ways, which would produce an agreeable play of light and shadow; and lastly, the capitals of the columns may have been, originally, simple blocks broader than the shafts, in order to increase the points of support under the entablature; and these would soon, by the taste of artists, be brought to the graceful forms they have since exhibited."

\* *Encyc. Metropol.*; article, Architecture.

It cannot be wondered at, that so imaginative a people as the Greeks should be in possession of many traditions respecting their architecture. We do not of course presume to decide whether they derived it from Egypt, and improved upon the cumbrous model which that country afforded; or whether, as has been asserted, "the hut of Pelasgus, the last entirely wooden cottage in Arcadia, remained the unvarying model of every subsequent fabric in stone and marble, however stupendous, which arose throughout Greece."

Such, then, according to Vitruvius, is the origin of the orders of architecture among the Greeks. This origin may or may not be true; and we do not lay any particular stress upon it, because Vitruvius is not altogether a safe authority. Without, therefore, attempting to unravel the complicated and contradictory appearances which theory and conjecture have thrown upon the origin of the orders, we may proceed to lay before the reader a statement of their principal characteristics, while at the same time we will not altogether disregard the theories which have been advanced, to account for their introduction.

It will be understood, that an *order*, in architecture, is that proportional disposition of building-materials which is peculiar to itself, and distinguished by two principal features; namely, the *ENTABLATURE* and the *COLUMN*. The former consists of the *cornice*, the *frieze*, and the *architrave*; the latter of the *capital*, the *shaft*, and the *base*.

The *architrave*, or, as the Greeks call it, the *epistyle*, is that part which immediately rests on the *columns*, and is supposed to represent the main beam of the primitive wooden temples.

The *frieze* is the central division, which rests on the *architrave*, and is usually ornamented. The Romans called it *phrygium*, which means *phrygian*, or *embroidery-work*; and the Greeks *zôphorus*, because they often adorned it with *animals*.

The *cornice*, from the Latin *coronis*, is the *upper part*, which supports the roof: it projects considerably beyond the rest, for the purpose of protecting the lower parts. The cornice is subdivided into many parts, which are ornamented according to the style.

The *capital* is the upper part, or crown, of the *column*. On this the *architrave* rests: it is ornamented in a manner peculiar to the order to which it belongs.

The *shaft* is that part of the column included between the capital and the base. The shaft was often ornamented with vertical channels or flutes, the origin and use of which, as we said before, have been variously stated; some, however, refusing to consider the flutings as forming spear-headers, call it an imitation of the *striated* or indented bark in the wooden pillars of the primitive temple; others, again, state that the idea was borrowed from the Egyptians, whose columns were suggested by bundles of reeds, papyrus stems, date-palms, &c.

The *base* is the lower termination of the column, resting on the flooring, or on a pedestal. It is formed of projecting mouldings, and a plinth, in number and form according to the order. The word *plinth* is from the Greek, and implies a *square tile*.

The proportions of all the parts of an architectural structure are regulated by the lower diameter of the shaft of the columns, which is divided into sixty parts, or lines. This is the *module*, or architectural scale.

The *façade*, or front of a building, is its most finished part, and is usually ornamented with a projecting *portico*, surmounted by a *pediment*.

The *pediment* is that part of a portico which rises above its entablature, to cover the end of the roof, the triangular form of which it assumes. A pediment is composed of two parts; viz., the *tympanum* and the *cornice*: the former is the interior area or panel, and is usually devoted to ornament or inscriptions: the latter is the highest part, and is placed last on the building, and *crowns* the whole.

The distance from column to column, or the clear space between columns, is called an *intercolumniation*.

Any one particular order may be easily recognised, by attending to a few simple points of difference, which we now proceed to enumerate. In the Doric order there is no base or moulding at the bottom of the column: the plain capital consists merely of an *echinus*, or convex moulding, and the *abacus*, or square stone. There is also a *triglyphed*, or three-channelled frieze. The Ionic or Corinthian is recognised by the voluted or the foliated capital, the chief distinction between these two orders being confined to the capital; since there is no precise difference between the

columns or entablatures of either order, except the modillions, which are certain regularly recurring ornaments, peculiar to the Corinthian. Again, with respect to the shaft: the flutes in the Doric order are broad and shallow, forming sharp ridges on the circumference of the shaft; but, in the other two orders, the flutes are narrower and deeper, and are separated from each other by spaces left between the flutings on the surface of the shaft. With respect to the architrave, the Doric consists of a plain face, surmounted by the *tonia*, or band, to which is attached, beneath each triglyph, another fillet, holding the *gutta*, or drops; but, in the other two orders, the architraves are generally divided into three faces, projecting somewhat the one above the other, with curved mouldings, plain or ornamented.

No one can rise from an attentive study of a Grecian Doric temple, without being struck with the masterly degree of skill with which its various parts are combined, so as to produce a grand and effective whole.

In proceeding to lay before the reader a somewhat detailed account of a Doric temple, we need scarcely offer an apology for using a variety of architectural terms, which may at first sight appear new and difficult. The great advantage of technical terms, at all times, is to convey concisely and emphatically to the mind, certain meanings or definitions which have been conventionally decided upon, and which, if attempted to be conveyed in what is called "popular language," would not only involve a description in much circumlocution, but would embarrass the careful reader, rather than assist him. At the same time, we must confess that a clear idea of the details and entire harmony of a fine building, cannot be obtained without a certain degree of fixed attention on the part of the reader. We therefore invite him to bestow this attention, with the assurance that, if he understand the means employed to confer so much simple beauty upon a mere collection of stones, he will find an additional interest imparted to his rambles, by his being able to appreciate the results of an architect's study, and to pronounce with some degree of confidence upon the good or bad taste of any structure which may come under his notice.

Without at all attempting to fix a standard of taste, we may offer a few remarks, by way of answer, to the very general questions,—"How am I to know when such a building is in good or bad taste?" "Why should a building be in good or bad taste, according as it does or does not agree with the structures of the ancient Greeks?" The answer to these questions is very simple. It has been admitted by the almost universal voice of men of talent and genius of all nations, who have studied the subject, that the public edifices of the ancient Greeks are perfect in their

kind; that their minutest, as well as their grandest parts, are combined with such consummate skill, that any alteration must be a deterioration. This combination was doubtless the result of much study and variation: this perfection of architecture must have occupied many first-rate architectural minds, through a course of ages. In a country, too, where polytheism prevailed; where temples were erected to so many objects of devotion, and the character of each temple was regulated by the properties (so to speak) of its presiding deity; and where public buildings of other kinds than those devoted to public worship, so greatly abounded; all such variety must have given experience to a civilized people bent upon the adornment of their cities. Here also the meanest member of the community felt a zeal and pride in such adornment; thus doubtless making it become a matter of competition with architects who should excel; and where the people themselves had the taste to decide upon excellence, we can no longer wonder that the remains of ancient art are now looked upon with reverence, treasured up in our museums, and imitated in our own structures, as the works of our masters in architectural art;—for such they surely were, else why do we copy their productions? and what else is it but a disregard of such perfect models at the present day, that has produced the general authorized opinion, that the modern taste for architecture in England is decidedly bad?

"No art," says Mr. Eustace, "deserves more attention than architecture, because no art is so often called into action, tends so much to the embellishment, or contributes more to the reputation of a country. It ought, therefore, at all events, to occupy some portion of time in a liberal education. Had such a method of instruction as that which is here recommended, been adopted a century ago, the streets of London, Oxford, and Cambridge would not present so many shapeless buildings, raised at an enormous expense, as if designed for eternal monuments of the opulence and of the bad taste of the British nation. We should not see such a multitude of absurd edifices, under the names of temples, ruins, &c., disgrace the scenery of England, so much admired by foreigners. In short, instead of allowing architects to pursue novelty at the expense of taste, and seek for reputation by adaptations and pretended improvements of their own invention, a method which has never yet succeeded, their employers should oblige them to adhere strictly to the ancients, and by adopting their forms and proportions, to adorn England with the noblest edifices of Greece and of Italy."

In our next Supplement on Architecture, we will conclude our details of the Grecian orders, and enter upon the fourth era of our history, including Roman Architecture.



TEMPLE OF THESEUS.